National and State Treatment Need and Capacity for Opioid Agonist Medication-Assisted Treatment

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Objectives. We estimated national and state trends in opioid agonist medication-assisted treatment (OA-MAT) need and capacity to identify gaps and inform policy decisions.

Methods. We generated national and state rates of past-year opioid abuse or dependence, maximum potential buprenorphine treatment capacity, number of patients receiving methadone from opioid treatment programs (OTPs), and the percentage of OTPs operating at 80% capacity or more using Substance Abuse and Mental Health Services Administration data.

Results. Nationally, in 2012, the rate of opioid abuse or dependence was 891.8 per 100 000 people aged 12 years or older compared with national rates of maximum potential buprenorphine treatment capacity and patients receiving methadone in OTPs of, respectively, 420.3 and 119.9. Among states and the District of Columbia, 96% had opioid abuse or dependence rates higher than their buprenorphine treatment capacity rates; 37% had a gap of at least 5 per 1000 people. Thirty-eight states (77.6%) reported at least 75% of their OTPs were operating at 80% capacity or more.

Conclusions. Significant gaps between treatment need and capacity exist at the state and national levels. Strategies to increase the number of OA-MAT providers are needed. (*Am J Public Health.* 2015;105:e55–e63. doi:10.2105/AJPH.2015.302664)

The abuse of prescription opioid pain relievers (OPRs) and illicit opioids such as heroin contributes to significant morbidity and mortality in the United States. After an unprecedented increase in overdose deaths, primarily involving OPRs, drug overdose death became the leading cause of injury death in the United States in 2009.[1] Underlying many of these deaths is a history of substance use disorder.[2–4] Indeed, rates of substance abuse treatment admissions for OPR abuse have increased in parallel with OPR overdose deaths.[5] Recently, concerns have focused on the relationship between OPR abuse and heroin initiation and subsequent increases in heroin use and deaths as well as transitions to injection drug use and increases in rates of HCV infections.[6–11]

Opioid agonist medication-assisted treatment (OA-MAT) with methadone or buprenorphine is the most effective treatment for opioid use disorder.[12] OA-MAT has been shown to increase treatment retention and to reduce opioid use, risk behaviors that transmit HIV and hepatitis, and mortality.[13–20] Historically, methadone, via federally regulated opioid treatment programs (OTPs), has been the main source of OA-MAT. Research has demonstrated significant access barriers to methadone, including waiting lists for treatment entry, limited geographic coverage, limited insurance coverage, and the requirement that many patients receive methadone at the OTP daily.[21–24]

To expand OA-MAT to a more geographically diverse population and integrate addiction treatment into general medical settings, Congress passed the Drug Addiction Treatment Act of 2000 (DATA 2000).[25] DATA 2000 permits qualified physicians to request a waiver (referred to in this article as a DATA waiver) from the Controlled Substances Act to treat opioid addiction outside of an OTP. Specifically, the law allows physicians to request a DATA waiver from the Substance Abuse and Mental Health Services Administration (SAMHSA) to prescribe certain Schedule III–V opioids approved by the US Food and Drug Administration for the treatment of opioid addiction.[25] The Drug Enforcement Administration then assigns separate registration numbers to identify DATA-waived physicians. These physicians can initially prescribe to as many as 30 patients. As of 2007, DATA-waived physicians can after 1 year submit a revised waiver to prescribe to as many as 100 patients. In October 2002, the Food and Drug Administration approved 2 buprenorphine formulations (a single entity and a combination with naloxone) as the first products that could be used under DATA 2000.

Similar to methadone, barriers exist for patients seeking OA-MAT with buprenorphine. Provider availability and willingness to prescribe, limited insurance coverage, and cost are commonly cited barriers.[26–30] In addition, provider barriers exist and contribute to the limited number of physicians seeking a DATA waiver and the underuse of buprenorphine among those who had obtained a waiver. Consistently identified barriers include willingness to prescribe, low provider confidence in addressing addiction, limited access to addiction experts, lack of institutional or office support, lack of behavioral health services, and reimbursement concerns.[31–36] Studies have found that approximately 44% to 66% of DATA-waived physicians actually prescribe buprenorphine; of these prescribers, the majority do not prescribe to their maximum patient limit.[32,33,35,37,38]

It is thought that access to OA-MAT has not kept pace with the increasing problem of opioid addiction in the United States.[24,39,40] However, studies have not quantified the gap between OA-MAT treatment need and capacity. We expanded the literature by estimating national and state OA-MAT treatment need and capacity. This information can substantially improve understanding of available OA-MAT resources and treatment gaps and inform policy and programmatic decisions to increase access to an intervention with well-documented public health benefits.

METHODS

The National Survey on Drug Use and Health (NSDUH) provides estimates of the use of alcohol, tobacco, and drugs by the US civilian, noninstitutionalized population aged 12 years or older. Additional information on the NSDUH methodology is available elsewhere.[41] We used public-use-file NSDUH data from 2003 to 2012 and restricted-use NSDUH data from 2009 to 2012.[42,43]

The National Survey of Substance Abuse Treatment Services (N-SSATS) is an annual survey conducted by SAMHSA that captures detailed information on all known substance abuse treatment facilities throughout the United States, including OTPs. We used data from the 2003 to 2012 N-SSATS public-use files.[44]

SAMHSA maintains information on all DATA-waived physicians such as certification date, state in which they practice, authorized patient limit (30 or 100), and whether they are listed on the SAMHSA buprenorphine treatment locater.[45] We used information from the program's inception in 2002 through 2012.

Study Variables

We used past-year opioid abuse or dependence to estimate treatment need. NSDUH respondents who report past-year drug use are asked a series of questions modeled after criteria in the *Diagnostic and Statistical Manual of Mental Disorders* (4th edition)[46] to identify individuals with past-year abuse or dependence on specific substances. For this analysis, we focused on individuals who met criteria for past-year abuse or dependence on opioids (either OPRs or heroin, or both).

To estimate the annual number of patients receiving methadone, we calculated the total number of patients receiving methadone in OTPs on the N-SSATS annual reference date, March 31. In addition, OTPs are asked to report their current outpatient operating capacity on the reference date. For this analysis, we assessed the percentage of OTPs operating at 80% capacity or higher.

To estimate buprenorphine treatment capacity, we calculated the total number of patients each DATA-waived physician could prescribe to, either 30 or 100. We focused on the total number of patients who could be treated with buprenorphine because this best represents the maximum potential buprenorphine treatment capacity.

Data Analysis

National opioid agonist medication-assisted treatment need and capacity. To estimate treatment need, we generated counts and rates of past-year opioid abuse or dependence by year for 2003 to 2012. For OA-MAT treatment capacity, we calculated by year for 2003 to 2012 cumulative counts and rates of DATA-waived physicians with a 30- or 100-patient limit and total number of potential patients who could be treated with buprenorphine, counts and rates of OTPs in operation annually, and patients receiving methadone in OTPs annually. Rates were per 100 000 people aged 12 years and older, based on data from the US Census Bureau.[47] We used the unpaired, 2-tailed t test to test for statistically significant ($P \leq .05$) differences in annual estimates and rates of past-year opioid abuse or dependence compared with the 2012 estimate.

State opioid agonist medication-assisted treatment need and capacity. To estimate treatment need, we calculated average annual rates of past-year opioid abuse or dependence by state using combined 2009 to 2012 restricted-use NSDUH data. To estimate OA-MAT treatment capacity, we calculated state rates of the maximum number of patients who could be treated with buprenorphine, the number of OTP patients receiving methadone, and the percentage of OTPs operating at 80% or greater capacity. To further elucidate state-level differences in markers of treatment capacity and access, we calculated by state the percentage of DATA-waived physicians with a 100-patient limit and the percentage of physicians listed on the SAMSHA buprenorphine treatment locator (a publicly available resource to help patients identify a potential treatment provider) through December 31, 2012. State rates are per 1000 people aged 12 years and older. We used the Pearson correlation coefficient to assess the relationship between state rates of past-year opioid abuse or dependence and OA-MAT treatment capacity.

We conducted all analyses with SAS version 9.3 (SAS Institute, Cary, NC), SAS-callable SUDAAN (RTI International, Research Triangle Park, NC), SPSS Complex Samples (IBM Corporation, Armonk, NY), and Microsoft Excel 2010 (Microsoft Corporation, Redmond, WA).

RESULTS

At the national level, past-year opioid abuse or dependence increased significantly between 2003 and 2012 (Table 1). In 2003, an estimated 1 507 130 people aged 12 years and older met criteria for opioid abuse or dependence; by 2012, this had increased to 2 319 213 people. The rate of past-year opioid abuse or dependence increased significantly from a rate of 634.1 per 100 000 people aged 12 years and older in 2003 to a rate of 891.8 in 2012.

Treatment capacity also increased during the study period. The cumulative number of DATA-waived physicians with a 30-patient limit increased from 1800 in 2003 to 16 095 by 2012. The cumulative number of DATA-waived physicians with a 100-patient limit increased from 1937 in 2007 to 6103 in 2012. By 2012, the maximum number of patients who could be treated with buprenorphine in the United States was 1 093 150, a rate of 420.3 per 100 000 people aged 12 years and older.

The number of OTPs operating during the study period was relatively stable, with between 1067 and 1239 OTPs operating each year. The number and rate of patients receiving methadone in OTPs increased annually between 2003 and 2012, from 227 003 to 311 718, a rate of 95.5 per 100 000 people aged 12 years and older in 2003 to a rate of 119.9 in 2012. In 2012, 3.5 times as many patients could be treated with buprenorphine as were receiving methadone in OTPs.

Figure 1 depicts annual national trends in past-year opioid abuse or dependence and OA-MAT treatment capacity as represented by the number of patients receiving methadone each year in OTPs and the cumulative maximum number of patients who could be treated with buprenorphine. In 2012, the difference between the number of people with past-year opioid abuse or dependence and combined methadone and buprenorphine treatment capacity was approximately 914 000 individuals.

Table 2 compares rates at the state level of past-year opioid abuse or dependence,

TABLE 1—Number and Rates of Past-Year Opioid Abuse or Dependence and Opioid Agonist Medication-Assisted Treatment Capacity, by Year: United States, 2003–2012

Year	Past-Year Opioid Abuse or Dependence		DATA-Waived Physicians, No. (Rate[a])		Maximum Potential Buprenorphine Patients, No. (Rate[a])	Opioid Treatment Programs/ Year, No. (Rate[a])	Patients Receiving Methadone in Opioid Treatment Programs/ Year, No. (Rate[a])
	Estimate (95% CI)	Rate[a] (95% CI)	With 30-Patient Limit	With 100-Patient Limit			
2003	1 507 130[b] (1 303 742, 1 710 518)	634.1[b] (552.8, 727.2)	1 800 (0.8)	0 (0)	54 000 (22.7)	1 067 (0.4)	227 003 (95.5)
2004	1 661 297[b] (1 475 145, 1 847 449)	690.7[b] (619.1, 770.6)	3 219 (1.3)	0 (0)	96 570 (40.2)	1 070 (0.4)	240 961 (100.2)
2005	1 690 219[b] (1 468 703, 1 911 735)	694.9[b] (609.6, 792.1)	5 419 (2.2)	0 (0)	162 570 (66.8)	1 069 (0.4)	235 836 (97.0)
2006	1 842 275[b] (1 611 676, 2 072 874)	748.8 (662.5, 846.3)	7 887 (3.2)	0 (0)	236 610 (96.2)	1 203 (0.5)	258 752 (105.2)
2007	1 854 894[b] (1 541 794, 2 167 993)	748.4 (634.1, 883.2)	8 566 (3.5)	1 937 (0.8)	450 680 (181.8)	1 108 (0.4)	262 684 (106.0)
2008	1 887 196[b] (1 679 588, 2 094 804)	755.4 (674.0, 846.7)	11 029 (4.4)	2 509 (1.0)	581 770 (232.9)	1 132 (0.5)	268 071 (107.3)
2009	2 053 570 (1 807 374, 2 299 767)	815.5 (721.5, 921.6)	12 228 (4.9)	3 380 (1.3)	704 840 (279.9)	1 239 (0.5)	285 686 (113.5)
2010	2 105 757 (1 761 273, 2 450 242)	830.3 (707.3, 974.5)	13 344 (5.3)	4 441 (1.8)	844 420 (332.9)	1 166 (0.5)	299 643 (118.1)
2011	2 097 321 (1 837 497, 2 357 144)	814.2 (718.0, 923.1)	14 656 (5.7)	5 230 (2.0)	962 680 (373.7)	1 189 (0.5)	307 780 (119.5)
2012	2 319 213 (1 980 730, 2 657 695)	891.8 (772.8, 1028.9)	16 095 (6.2)	6 103 (2.3)	1 093 150 (420.3)	1 167 (0.4)	311 718 (119.9)

Note. CI = confidence interval; DATA = Drug Addiction Treatment Act of 2000.
Source. Data are from the National Survey on Drug Use and Health, the National Survey of Substance Abuse Treatment Services, and the SAMHSA DATA 2000 Waiver Program.
[a]Rates are per 100 000 people aged ≥ 12 years.
[b]Past-year opioid abuse or dependence estimate or rate is statistically significantly different than 2012 estimate ($P < .05$).

maximum potential rates of buprenorphine treatment capacity, percentage of DATA-waived physicians with a 100-patient limit, percentage of DATA-waived physicians listed on the buprenorphine treatment locator, and percentage of OTPs operating at 80% or greater capacity by state. Rates of past-year opioid abuse or dependence ranged from 3.4 per 1000 people aged 12 years and older in Kansas to 12.9 in West Virginia. Rates of buprenorphine treatment capacity varied from 0.7 patients per 1000 people aged 12 years and older in South Dakota to 13.8 in Vermont. Forty-eight states and the District of Columbia (96%) had rates of past-year opioid abuse or dependence that were higher than their rates of buprenorphine treatment capacity; 19 states (37%) had a gap of at least 5 per 1000 people.

Through 2012, 27.5% of DATA-waived physicians nationally had a waiver to prescribe to as many as 100 patients. No state had more than 45% of their DATA-waived physicians with a 100-patient limit, with 29 of 51 (56.7%) having 30% or fewer. The percentage of DATA-waived physicians listed on the buprenorphine treatment locator nationally was 55.4%. The percentage by state varied from 19.9% in Vermont to 72.2% in Alabama. Sixteen of 51 (31%) had fewer than 50% of DATA-waived physicians listed on the treatment locater.

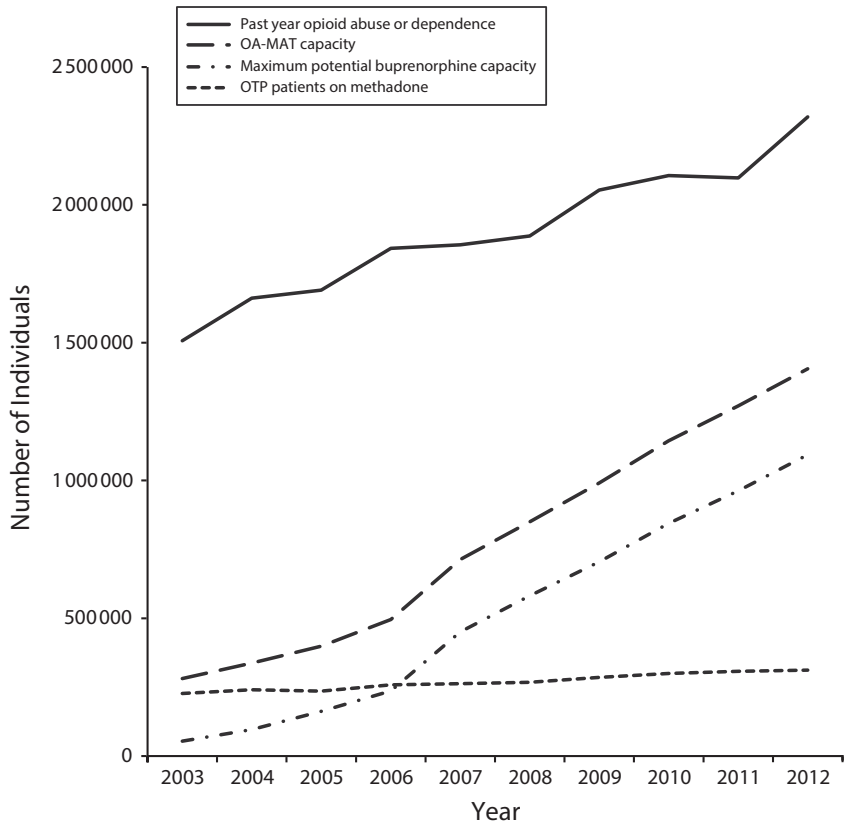
Eighty-two percent of OTPs nationally reported operating at 80% or greater capacity in 2012. Of 48 states and the District of Columbia, 13 (26.5%) reported 100% of their OTPs were operating at 80% or greater capacity. Another 25 states (51.0%) reported at least 75% of their OTPs were operating at 80% or greater capacity. Wyoming and North Dakota had no OTPs in 2012.

Figure 2 compares state average annual rates of past-year opioid abuse and dependence for 2009 to 2012 and state rates of OA-MAT capacity (combined maximum number of potential buprenorphine patients and number of patients receiving methadone in OTPs) in 2012. The correlation between state rates of past-year opioid abuse or dependence and OA-MAT capacity was moderately positive ($r = 0.41$; $P = .003$).

DISCUSSION

This study's findings show that potential OA-MAT treatment capacity increased markedly between 2003 and 2012—driven largely by the increase in number of DATA-waived physicians. Nonetheless, our findings indicate that the large gap in treatment need and capacity did not significantly close as the opioid epidemic took hold. In 2012, a gap of nearly 1 million people existed nationally, which represents a best-case scenario in which all DATA-waived physicians are prescribing at their maximum patient limit. Previous research has indicated that this is not the case.[32,33,35,37,38] Indeed, a random survey of DATA-waived providers in 2008 estimated that the number of patients currently receiving buprenorphine represented 57% of potential capacity.[48] Applying the estimate of 57% to the 2012 data in our study, this represents roughly 623 000 current buprenorphine patients. If we base capacity on a provider's voluntary listing on the buprenorphine treatment locator—or approximately 55% of DATA-waived providers—we estimate that slightly more than 709 000 patients are receiving buprenorphine. These estimates suggest a gap between treatment need and capacity of 1.4 and 1.3 million in 2012, respectively.

At the state level, our findings demonstrate significant variation in treatment need and capacity, with a majority of states having higher rates of treatment need than treatment capacity. With respect to potential buprenorphine treatment capacity, the majority of states had a gap of at least 3 patients per 1000 people. Moreover, the majority of OTPs were operating at 80% or more capacity, suggesting that they would not be able to handle a significant



Note. OA-MAT = opioid agonist medication-assisted treatment; OTP = opioid treatment program.

FIGURE 1—Trends in past-year opioid abuse or dependence and opioid agonist medication-assisted treatment capacity: United States, 2003–2012.

number of new patients. The moderate correlation between rates of past-year opioid abuse or dependence and OA-MAT capacity underscores the disconnect between state treatment need and capacity. Previous studies have identified a number of factors driving the differential adoption and diffusion of medication-assisted addiction treatment. These factors include differences in Medicaid and other insurance coverage, state licensing and regulation of treatment facilities, facility funding sources, and parity laws.[49,50] These policies may have contributed to the state variation in OA-MAT capacity, percentage of providers seeking a 100-patient limit, and percentage of providers listed on the buprenorphine treatment locator seen in this study. It is worth noting that states in the northeastern United States tended to have greater potential OA-MAT capacity than states in other regions. Many were early adopters of buprenorphine-based MAT and have implemented a number of unique programs to expand OA-MAT capacity.[50–52]

As demonstrated in this study, far more patients are in need of treatment than can currently access it. Studies have shown that a minority of patients in need of treatment actually seek or receive it.[41] Primary reasons include inadequate accessibility or availability, stigma, a belief that they can handle the problem without treatment, not being ready to stop using substances, lack of health insurance coverage, privacy concerns, and treatment cost.[1,41] Through the Patient Protection and Affordable Care Act,[53] several changes will help address some of these patient-level barriers. Clinical services for substance use disorders are an essential health benefit that must be covered by insurers, with specific coverage varying by state and health plan. In addition, the expansion of Medicaid in 27 states and the District of Columbia as of October 2014 means that individuals who previously did not qualify for Medicaid—many with substance use disorders—will have coverage for substance abuse treatment in the states that expand. Although these changes help to remove certain barriers, this study highlights the fundamental need for a sufficient supply of trained clinicians to provide care for these newly covered individuals. Additional efforts are needed to put systems in place to better identify people in need of treatment and to connect people with the right treatment when they seek care. Moreover, efforts to reduce the stigma of addiction and the use of medications to treat addiction must continue to be supported. It has been well documented that addiction and MAT-related social stigma contribute to social isolation, reduce help-seeking behaviors, and undermine long-term recovery.[54] Sufficient capacity is irrelevant if stigma prevents patients from seeking treatment.

A series of complementary, clinician-focused practice and policy changes at both the national and the state levels will be required to address the treatment gap identified in this study. In addition to changes under the Affordable Care Act, changes that address administrative barriers such as clinician reimbursement strategies that provide appropriate and timely payment for services are needed. Restrictions imposed on pharmacy benefits such as preauthorization, "fail-first," quantity limits, and lifetime limits on duration of therapy intended to support appropriate cost-effective prescribing are barriers for both patients and providers and contribute to reduced uptake of OA-MAT.[29,31,32,35] An assessment of these policies for intended and unintended outcomes is needed.

Education of physicians in the diagnosis and management of addiction is inadequate, and low confidence in addressing addiction and administrative factors such as lack of institutional and administrative support are barriers to providing OA-MAT.[31,32,35,36] Not only does time spent in science-based education in addiction across clinician training need to be improved, support needs to be available to assist trained providers in OA-MAT adoption. Investments in programs that use onsite mentors and access to experienced clinicians can help provide the skills needed to implement office-based treatment.[55] Adoption of remote forms of behavioral therapy

TABLE 2—Rates of Past-Year Opioid Abuse or Dependence, Maximum Potential Buprenorphine Treatment Capacity, Percentage of DATA-Waived Physicians With 100-Patient Limit, Percentage of DATA-Waived Physicians on Treatment Locator, and Opioid Treatment Program Operating Capacity by State: United States, 2012

Region	Past-Year Opioid Abuse or Dependence,[a] Rate (95% CI)	Maximum Potential Buprenorphine Treatment Capacity, Rate (95% CI)	% of DATA-Waived Physicians		% of OTPs at ≥ 80% Capacity
			100-Patient Limit for Buprenorphine	Listed on Buprenorphine Treatment Locator	
United States	8.3 (7.8, 8.9)	4.1 (4.1, 4.1)	27.5	55.4	82.3
Northeast region					
Connecticut	9.5 (5.7, 15.9)	7.4 (7.3, 7.5)	29.4	53.4	96.8
Maine	10.0 (7.0, 14.0)	13.3 (13.1, 13.5)	33.8	32.1	70.0
Massachusetts	11.7 (7.3, 18.6)	9.9 (9.8, 10.0)	31.0	39.7	90.0
New Hampshire	11.2 (7.3, 18.6)	4.2 (4.1, 4.4)	34.4	46.7	75.0
New Jersey	10.3 (6.8, 15.5)	5.8 (5.7, 5.9)	28.8	62.4	91.4
New York	6.9 (5.5, 8.6)	6.7 (6.6, 6.7)	22.0	59.7	87.0
Pennsylvania	10.3 (8.1, 12.9)	6.5 (6.5, 6.6)	30.6	48.1	87.3
Rhode Island	12.0 (7.9, 18.1)	10.0 (9.8, 10.2)	35.3	46.1	83.3
Vermont	9.9 (6.8, 14.5)	13.8 (13.5, 14.1)	22.3	19.9	100
Midwest region					
Illinois	6.0 (4.6, 7.8)	2.2 (2.1, 2.2)	24.2	60.1	76.9
Indiana	12.6 (8.6, 18.4)	2.8 (2.8, 2.9)	34.3	62.9	83.3
Iowa	3.5 (2.6, 4.8)	1.0 (0.9, 1.0)	21.8	47.3	50.0
Kansas	3.4 (1.9, 5.9)	1.7 (1.7, 1.8)	18.6	62.9	100
Michigan	9.2 (7.3, 11.6)	5.3 (5.2, 5.3)	30.3	50.4	73.3
Minnesota	4.1 (2.3, 7.3)	2.0 (1.9, 2.0)	22.6	40.0	92.9
Missouri	8.3 (5.4, 12.8)	2.2 (2.1, 2.2)	30.6	51.9	80.0
Nebraska	6.6 (3.7, 11.8)	1.2 (1.2, 1.3)	18.2	54.6	100
North Dakota	4.1 (2.6, 6.3)	2.0 (1.9, 2.1)	24.0	48.0	No OTPs
Ohio	10.0 (8.1, 12.3)	4.0 (3.9, 4.0)	34.7	59.8	100
South Dakota	4.7 (2.2, 10.0)	0.7 (0.6, 0.8)	0.0	37.5	0.0
Wisconsin	4.9 (2.9, 8.4)	3.3 (3.2, 3.3)	27.6	48.3	100
South region					
Alabama	6.4 (4.1, 10.0)	4.0 (3.9, 4.0)	41.8	72.2	75.0
Arkansas	11.6 (7.0, 18.9)	1.7 (1.6, 1.7)	39.4	62.0	100
Delaware	10.8 (7.1, 16.3)	5.1 (5.0, 5.3)	33.3	62.7	100
District of Columbia	6.7 (3.6, 12.3)	5.8 (5.6, 6.0)	17.1	61.8	100
Florida	7.7 (6.0, 9.8)	4.2 (4.2, 4.3)	28.5	72.0	75.0
Georgia	4.8 (2.8, 8.4)	3.2 (3.2, 3.2)	26.2	66.5	81.3
Kentucky	11.7 (8.3, 16.5)	5.8 (5.7, 5.9)	42.0	63.8	63.6
Louisiana	9.4 (7.1, 12.4)	4.1 (4.1, 4.2)	36.4	65.7	75.0
Maryland	9.9 (5.7, 17.2)	7.9 (7.8, 7.9)	27.7	51.7	86.3
Mississippi	8.6 (5.7, 12.9)	3.8 (3.7, 3.9)	44.8	71.4	100
North Carolina	10.3 (5.5, 19.1)	2.9 (2.9, 2.9)	30.8	60.3	90.2
Oklahoma	11.3 (7.0, 18.1)	2.2 (2.2, 2.3)	26.5	59.9	84.6
South Carolina	10.2 (5.9, 17.5)	2.8 (2.7, 2.8)	29.2	61.6	72.7
Tennessee	10.2 (7.5, 13.8)	4.6 (4.5, 4.6)	41.0	67.7	83.3
Texas	6.6 (5.1, 8.5)	2.2 (2.2, 2.2)	26.8	62.3	87.9
Virginia	6.5 (3.6, 11.7)	2.7 (2.6, 2.7)	30.7	57.3	95.0
West Virginia	12.9 (9.6, 17.3)	7.0 (6.9, 7.2)	41.4	57.1	100

Continued

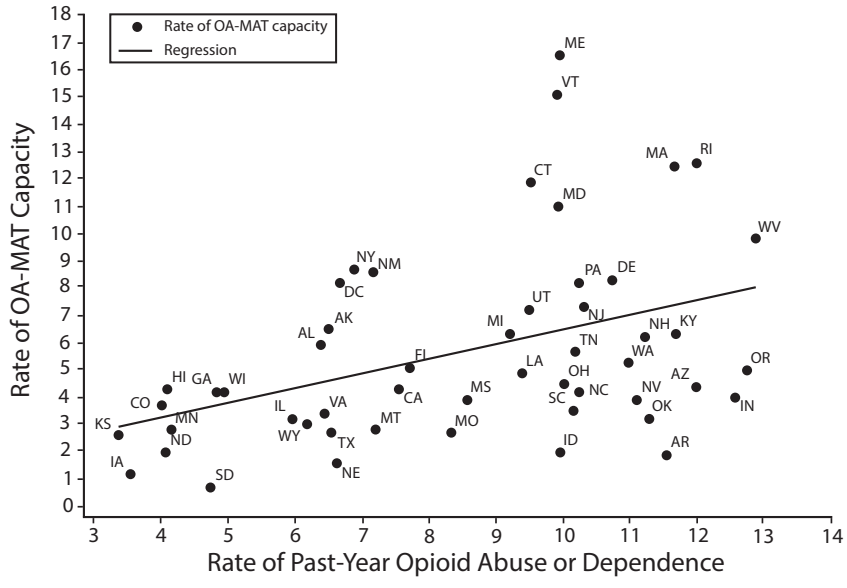
TABLE 2—*Continued*

West region					
Alaska	6.5 (3.9, 10.7)	6.2 (6.0, 6.4)	18.2	51.1	100.0
Arizona	12.0 (7.6, 18.8)	3.4 (3.4, 3.5)	21.1	48.3	69.2
California	7.6 (5.9, 9.6)	3.4 (3.4, 3.4)	19.4	52.9	70.8
Colorado	4.0 (2.9, 5.6)	3.2 (3.1, 3.2)	26.4	45.8	78.6
Hawaii	4.1 (2.5, 6.7)	3.8 (3.7, 3.9)	21.0	54.0	100.0
Idaho	10.0 (6.9, 14.5)	2.0 (1.9, 2.1)	32.0	58.0	0.0
Montana	7.2 (4.8, 10.7)	2.6 (2.5, 2.8)	32.6	51.2	100.0
Nevada	11.1 (8.0, 15.4)	3.5 (3.4, 3.6)	28.4	56.2	50.0
New Mexico	7.2 (4.9, 10.5)	7.1 (7.0, 7.2)	17.9	52.4	77.8
Oregon	12.8 (8.5, 19.2)	3.7 (3.7, 3.8)	19.8	36.8	75.0
Utah	9.5 (6.4, 14.2)	6.3 (6.2, 6.4)	31.0	47.1	45.5
Washington	11.0 (7.3, 16.6)	4.1 (4.1, 4.2)	21.3	39.0	84.2
Wyoming	6.2 (3.6, 10.7)	3.0 (2.8, 3.1)	17.6	64.7	No OTPs

Note. CI = confidence interval; DATA = Drug Addiction Treatment Act of 2000; OTP = opioid treatment program. Rates are per 1000 population aged ≥ 12 years.
Source. Data are from the National Survey on Drug Use and Health, the National Survey of Substance Abuse Treatment Services, and the SAMHSA DATA 2000 Waiver Program.
[a]Rate of past-year opioid abuse or dependence represents average annual rate for 2009–2012 calculated by the Substance Abuse and Mental Health Services Administration's Center for Behavioral Health Statistics and Quality using a restricted-use National Survey on Drug Use and Health data file.

can make existing trained professionals more accessible to those in underserved or isolated communities.[56–58]

Raising the limit on the number of patients who can be treated with buprenorphine by an individual provider and expanding the types of providers (e.g., nurse practitioners or physician assistants) who can prescribe buprenorphine under DATA 2000 are additional policy options to consider. These potential changes should be undertaken in a thoughtful, data-driven, and planned fashion that incorporates feedback from all stakeholders.



Note. OA-MAT = opioid agonist medication-assisted treatment.

FIGURE 2—Comparison of state rates of past-year opioid abuse or dependence and capacity for opioid agonist medication-assisted treatment: United States, 2012.

As shown in this study, the number of OTPs remained relatively stable between 2003 and 2012. An increase in the number of operating OTPs would also help address treatment gaps. OTPs are an important part of the OA-MAT armamentarium because they offer onsite medical care required for those receiving methadone. Furthermore, DATA 2000 does not impose patient limits for buprenorphine use within OTPs, although state requirements may do so. Buprenorphine uptake in OTPs has been limited.[59] Despite strong evidence of public health benefit, there has been long-standing discrimination against OTPs, and the perception of a large regulatory burden in providing OA-MAT through OTPs remains. In addition, OTP capacity is often dictated by a variety of state and local requirements. These challenges, which have limited the reach of OTPs, suggest that applicable federal, state, and local regulations need to be reexamined to maximize OA-MAT in OTPs.

Use of oral or long-acting injectable formulations of the opioid antagonist naltrexone presents an additional opportunity to expand MAT for opioid use disorders. Unlike with methadone or buprenorphine, there are no federal requirements or restrictions on the type of clinician who can prescribe naltrexone. To date, use of naltrexone has been minimal compared with methadone or buprenorphine.[60]

The finding of significant state variation in rates of opioid abuse or dependence in this study is consistent with previous studies that have shown wide variation among state rates of drug overdose deaths, patients receiving opioids from multiple providers, and nonmedical use of opioids.[5,61] Previous research has indicated that this variation is closely tied to state opioid supply and prescribing habits.[5,61,62] Therefore, concerted efforts to expand access to OA-MAT in conjunction with policies that target the underlying drivers of the problem—inappropriate OPR prescribing and use—are essential for a long-term solution. Several strategies have shown promise for reducing inappropriate prescribing and use, such as implementation of OPR prescribing guidelines and education programs; development of real-time, interoperable state prescription drug monitoring programs; development of innovative insurer strategies; and implementation of laws, regulations, or policies that better monitor and regulate providers who might be indiscriminately prescribing opioids.[1]

Limitations

This study has several limitations. First, NSDUH data are self-reported, and their value depends on the truthfulness and accuracy of individual respondents; under- or overreporting may occur. Second, NSDUH only captures noninstitutionalized civilians; populations such as homeless and incarcerated people and those in residential treatment are excluded. Therefore, our estimates may not generalize to the total US population and may exclude populations that include additional high-risk patients who would likely be candidates for OA-MAT. Thus, the true gap between treatment need and capacity is likely greater than that presented in our study.

Third, our definition of treatment need included both past-year opioid abuse and dependence. It is possible that some of the individuals with past-year opioid abuse would not be candidates for OA-MAT. Fourth, N-SSATS attempts to obtain responses from all known treatment facilities, but responding is voluntary. Although annual response rates were more than 90%, there was no adjustment for nonresponding facilities. Fifth, N-SSATS is a point-prevalence survey. Counts reported do not represent annual totals; rather, they represent a snapshot of facilities and patients on an average day in the past year. N-SSATS is based on facility self-report; therefore, counts rely on the accuracy of the reporter.

Sixth, we did not have information on the actual number of patients prescribed buprenorphine by DATA-waived providers; our calculations were designed to represent the maximum number of patients who could be treated to enable an assessment of potential treatment capacity. Therefore, the difference between treatment need and capacity likely represents an underestimate of the actual gap at the national and state levels. Seventh, the opioid antagonist naltrexone is an alternative to OA-MAT that can help address the current treatment capacity gap. Data on the number of patients receiving naltrexone were not available for this study. Thus, we may have overestimated the actual treatment gap. However, this overestimation is likely very small given that naltrexone uptake among treatment programs to date has been minimal.[60]

Finally, not all patients who are candidates for OA-MAT will choose this treatment option and may instead pursue drug-free treatment. Consequently, our findings may overestimate the OA-MAT treatment gap. Nevertheless, the evidence overwhelmingly supports OA-MAT as the most effective treatment for opioid addiction. The World Health Organization guideline for people with opioid dependence states that most patients should be advised to use opioid agonist maintenance treatment.[12] Thus, our estimates, which represent the maximum potential capacity for OA-MAT, show that the currently available OA-MAT resources are substantially inadequate to meet guideline-concordant care.

Conclusions

OA-MAT capacity increased in the past decade in the United States, however, a significant gap between treatment need and capacity remains. This is particularly acute in some of the states with the greatest need for opioid addiction treatment. Strategies to expand the addictions professionals workforce and to increase the existing pool of OA-MAT providers are needed. These actions, when taken in concert with broader policy and practice efforts, will address the underlying drivers of this public health crisis. ■

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***Note**. The conclusions in this report are those of the authors and do not necessarily represent the official position of the Food and Drug Administration, the Substance Abuse and Mental Health Services Administration, or the Centers for Disease Control and Prevention.*

Contributors

C. M. Jones conceptualized the article, was responsible for the data analyses, and was the lead writer. M. Campopiano, G. Baldwin, and E. McCance-Katz conceptualized the article, contributed specific content, and drafted revisions of the article.

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Human Participant Protection

Human participant protection was not required because the study was a secondary analysis of de-identified data.

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